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Portable System Heads List of Wang Introductions

NEW YORK — Wang Laboratories, Tewksbury, Mass., introduced nine products here last week, including a lower-priced portable computer/calculator aimed at IBM's 5100 and a work-station aimed at IBM's System 32.

The other seven products consisted of five peripherals, one a 120-cps printer, and two software packages.

The new 2200 PCS (portable computing system) incorporates two modifications to the firm's previous unit for the computer/calculator market: lower priced memory and an integrated power supply, the latter making the system portable at about 55 pounds.

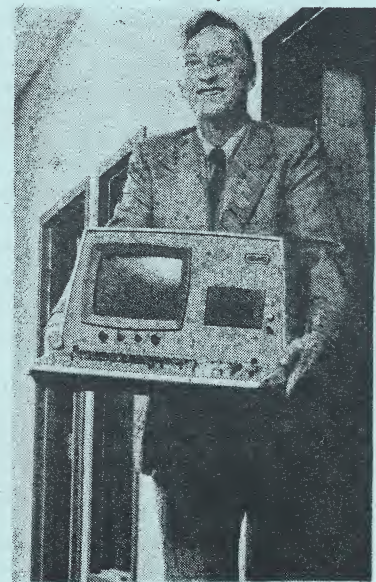
The new 2200 PCS carries a domestic base price of \$5,400 for a unit with 8K bytes of semiconductor memory, 42.5K bytes of read-only memory, a 9-inch CRT display and tape cassette. That price was the same for Wang's earlier basic configuration, which, however, included only 4K bytes of RAM.

Wang said it has cut the price of its memory an average of 30 per cent. Thus, expansion to a full 32K bytes will put the machine at \$9,800 in the U.S. instead of the previous \$12,400.

However, the firm has adopted a two-tier price strategy on memory. In an effort to make initial sales of 2200 PCS units with as much memory as possible, Wang priced the machines at \$5,400, \$7,000, \$8,400 and \$9,800 for, respectively, 8K, 16K, 24K and 32K. If, after a purchase is made of anything less than a full 32K, a user wishes to expand memory he would have to pay a higher add-on rate: \$2,000 for 8K and \$3,200 for 16K.

Consequently, a user who bought and took delivery of a 2200 PCS with 24K, for example, would have to spend another \$2,000 to go to 32K later. His total expenditure would be \$10,400 instead of the \$9,800 if all 32K were included in the initial sale.

John Cunningham, senior vice-president, North American sales, said the 2200 PCS would compete not only against IBM's 5100 but also against Tektronix 4051, and Hewlett-Packard's 9825. He also saw it competing against general-purpose computers such as Digital Equipment's PDP-8 and against bookkeeping machines made by NCR, Nixdorf and Olivetti, among others.



PORTABLE: Ralph Crusius, Wang Laboratories director of customer relations, totes the firm's 2200 PCS, a 55-to-57 pound computer/calculator aimed at IBM's 5100.

(cont. on pg.2)

Unit Monitors Response Time

SALT LAKE CITY, Utah — Questronics, Inc. has introduced a hardware monitor said to be designed specifically for measuring the performance of interactive terminals.

The Terminal Response Time Monitor (TRTM) can measure the response time of each transaction performed by a terminal and compute the average of these times, the company said.

It will also retain the maximum and minimum response times which have occurred, Questronics added.

The monitor uses an optical coupler system for attachment that does not require internal connections to the ter-

minal. This feature eliminates locating the proper probe points within the terminal, the company said.

The optical coupler uses a photocell that is placed on the system to inhibit light and can be attached to any CRT terminal that has an inhibit spot or light.

The monitor measures the time the inhibit light is on and counts it as one transaction; this transaction time is added to the total transaction time to that point. TRTM then recomputes a new average and checks to see if the current transaction is a new minimum or maximum, the company said.

Unattended operation of the unit is

under control of a dedicated microprocessor within the monitor and the response time information is displayed on a four-digit LED display, it said.

The average, minimum, maximum and number of transactions are selected by a front-panel switch located on the TRTM.

The TRTM can also be used for any device which has a light that turns on when in use, Questronics said.

Applications such as Wats line usage and modem operation can also be monitored using TRTM, the company said.

The monitor is priced at \$950 from Questronics at 3596 South 300 West, Salt Lake City, Utah 84115.

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(Cont. from pg. 1)

He said the new 2200WS (work station) would enable Wang to compete in the distributed processing market against IBM's S/32, in the intelligent terminal market against Sycom and Datapoint and in the small computer market DEC and Data General.

The basic workstation is priced at \$4,900 and comes with 8K bytes of semiconductor RAM, a 12-inch CRT display, keyboard, and disk multiplexer interface and connector. The firm previously offered equipment similar in function but at a price of \$7,500 for an equivalent configuration, a spokesman said.

Wang said a typical system would consist of a CPU with 16K bytes, a five-megabyte disk drive, a 200-cps printer, a single floppy disk drive, a CRT/keyboard control console, desk and stand, disk multiplexer and two work stations. Domestic price would be \$41,000. Binary synchronous communications capability for emulation of the IBM 2780, 3780 or 3741 terminals would add \$2,500.

Said to be capable of processing up to four jobs simultaneously, the 2200 work stations are aimed at two major markets, according to Mr. Cunningham. These are remote sites within large organizations and small businesses with processing needs that require more than one work station.

As in previous Wang systems, the two new products use an expanded version of the Basic software language which the firm said was capable of handling both commercial and scientific processing.



WORK STATION: Wang Laboratories new work station, the 2200WS, is designed for both stand-alone and distributed processing markets in competition with IBM's System/32 and other competitive products.

The new peripherals include the 120-cps printer, Model 2231W, priced at \$2,900; the 12-inch, 24 x 80 character CRT used with the work station, priced at \$400; and the Model 2272 drum plotter, priced at \$2,900. The binary synchronous controller, Model 2228, which can be used with the work station, is priced at \$2,500, while a buffered asynchronous controller, Model 2227B, is priced at \$1,000.

The two software packages are the management planning system, priced at \$200, and the cash accounting system, which is bundled in a turnkey system.

Wang said the management planning system can run on a \$9,700 portable computer and a \$13,300 work station. A turnkey system for the cash accounting system is priced at \$25,300.

Reprinted From Electronic News,
March 29, 1976.

Remote, Raw-Power Services Should Grow 25% Annually: IDC

WALTHAM, Mass. — The remote, raw-power services industry should grow about 25%/year to nearly \$1.8 billion by the end of 1979 compared with an estimated \$715 million at year-end 1975, according to International Data Corp. (IDC) figures published in *EDP Industry Report* (EDP/IR).

Slightly more than half of this growth will come from remote batch rather than from interactive time-sharing, the market research firm said.

But remote, raw-power services is only a part of the total computer services industry, the report said. Preliminary IDC estimates indicated revenues from all computer services in 1975 totaled about \$3.17 billion.

Remote autotransaction services accounted for another 25% of 1975 reve-

nues and is expected to grow even faster, reaching nearly 40% of the total by year-end 1980, EDP/IR said.

GE Leads Pack

Breaking down the current remote, raw-power supplies, the report indicated General Electric's (GE) Information Services Division led the pack in 1974 with a 15% share of the market.

CDC's Service Bureau Corp., not counting major autotransaction services for hospitals, banks, etc., was second with 11% of the market, according to the report.

Tymshare, Inc. and Computer Sciences Corp. tied with 6%, while National CSS was 5%, again not including autotransaction services.

Observing the trend by vendors to diversify their services, such as adding software

tools and data base capability, EDP/IR remarked that, although "plain-vanilla" raw computer power will remain a healthy market in this decade, other sub-industries — autotransaction services, facilities management, maintenance, etc. — will grow faster."

In examining IBM's announcement of Virtual Storage Personal Computing (VSPC), the newsletter said it looks as if VSPC's "major impact (besides on the DP manager looking to justify 'IBMness' or a switch to VS) will be on the remote, raw-power service firms — if not head to head in today's marketplace, at least in lost potential."

Reprinted from Computer
World, Feb. 16, 1976,
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Adapso Opposes Banks in DP Services

By Edith Holmes
Of the CW Staff

WASHINGTON, D.C. — National banks should be allowed to offer DP services only under conditions of "maximum separation" between the units offering DP services and other banking services, the Association of Data Processing Service Organizations (Adapso) told a recent Senate committee hearing.

The organization also asked Congress to clearly invest one federal agency with the power to apply any such legislation.

These were two of the teeth Adapso told the Committee on Banking, Housing and Urban Affairs it would like to see put in the Competition in Banking Act of 1975 (S. 2721), which it supports.

S. 2721 is an amendment to the Bank Holding Company Act and Bank Merger Act.

In the long run, Adapso has a fully developed electronic funds transfer system (EFTS) in mind, according to Bernard Goldstein, director and past president of the association and vice-president of Tymshare, Inc.

He presented to Sen. William Proxmire (D-Wis.) and his committee Adapso position papers which argued the marketing of DP services by banks effectively destroys competition in the computer services industry and could eventually create "an improperly designed EFTS" by excluding non-bank-affiliated DP services organizations.

For 10 years Adapso has attempted to obtain protection against unfair competition from banks through public information, the Comptroller of the Currency, in the courts and before the Federal Reserve Board (FRB), Goldstein said. He outlined for the committee the concerns of the association's 283 company members, which he characterized as "the major suppliers of computer services in this country."

Adapso is and has been worried about "the dangers of the spillover of market power from other lines of commerce" to that of the DP services industry, he told the committee.

In particular, he cited "incremental marketing" by banks — "the use of so-called excess computer capacity employed in one line of commerce to market computer services in a second line."

While recognizing the public could benefit from a lowering of prices for computer services if banks operate them as a sideline, Goldstein said a "tying effect" could also result in which normal banking services would be used to convince customers to use the bank's computer services as well.

It is this tying effect which the association regards "as frequently unlawful and always improper and unfair," he said.

In difficult economic times, the risks of tying and the tying effect are substantial in banking and finance, he added, noting no coercion is necessarily involved.

"Rather, the borrower, recognizing the bank's discretion and economic power, is tempted voluntarily to patronize bank-affiliated enterprises in the hope of improving his chances to obtain it on favorable terms," Goldstein noted.

The association suggested congress permit the tying effect only in those instances where there is some benefit to the public — whether economic or social.

Where there are no such benefits, however, the two lines of commerce should be kept independent of each other, Goldstein said.

Maximum Separation

He called this the principle of maximum separation and suggested it was first applied in the computer industry with the 1956 Consent Decree against IBM, in which that corporation's service division was split from the rest of its operations.

"In banking, for example, this would mean that a bank's computer services offering would be divorced from its credit operations by using separate and distinct company names, different personnel, separate equipment, operating in a different territory and as much else as would ensure that the customer went where he went because of the product and not the parent," he told the committee.

The bill being proposed by Proxmire would generally restrict the activities in which registered bank holding companies may engage. It would also control the acquisition of banks by bank holding companies and other banks, the Adapso representative noted.

The association hopes the proposed legislation will result in much less marketing of DP services by banks and in the application of the maximum separation concept "so that bankers could market only in areas other than their banking area with different facilities, different personnel and the like," he indicated.

"But I hasten to add that we had these same hopes when the bank Holding Company Act was last amended [in 1972]," he added.

"We pointed out to the committees then considering the matter, however, that these were only hopes and that experience taught that regulatory agencies' perceptions all too frequently are the result of the perceptions of those they regulate."

Illustrates Difficulties

To illustrate the difficulties posed by the last attempt to amend the Bank Holding Company Act and to argue for control by one agency over whether a bank should be permitted to offer services outside the normal banking realm, Goldstein related one incident to the committee.

When amended in 1972, the Bank Holding Company Act gave power for the determination of what were "closely related" or "public benefit" services to the FRB.

That agency did apply the principle of maximum separation to the holding companies' offerings of DP and other activities, Goldstein recalled.

"One rejection [by the FRB] was the proposed acquisition of Dial Financial Corp. by Chase Manhattan Corp., a banking holding company," he stated.

"After this experience the Chase Manhattan avoided the FRB, and the application of the Bank Holding Company Act, on its next acquisition.

"It acquired Interactive Data Corp., a computer service company, into a subsidiary, the Chase Manhattan Bank, as opposed to the holding company, after applying to a permissive Office of the Comptroller instead of the FRB," he continued.

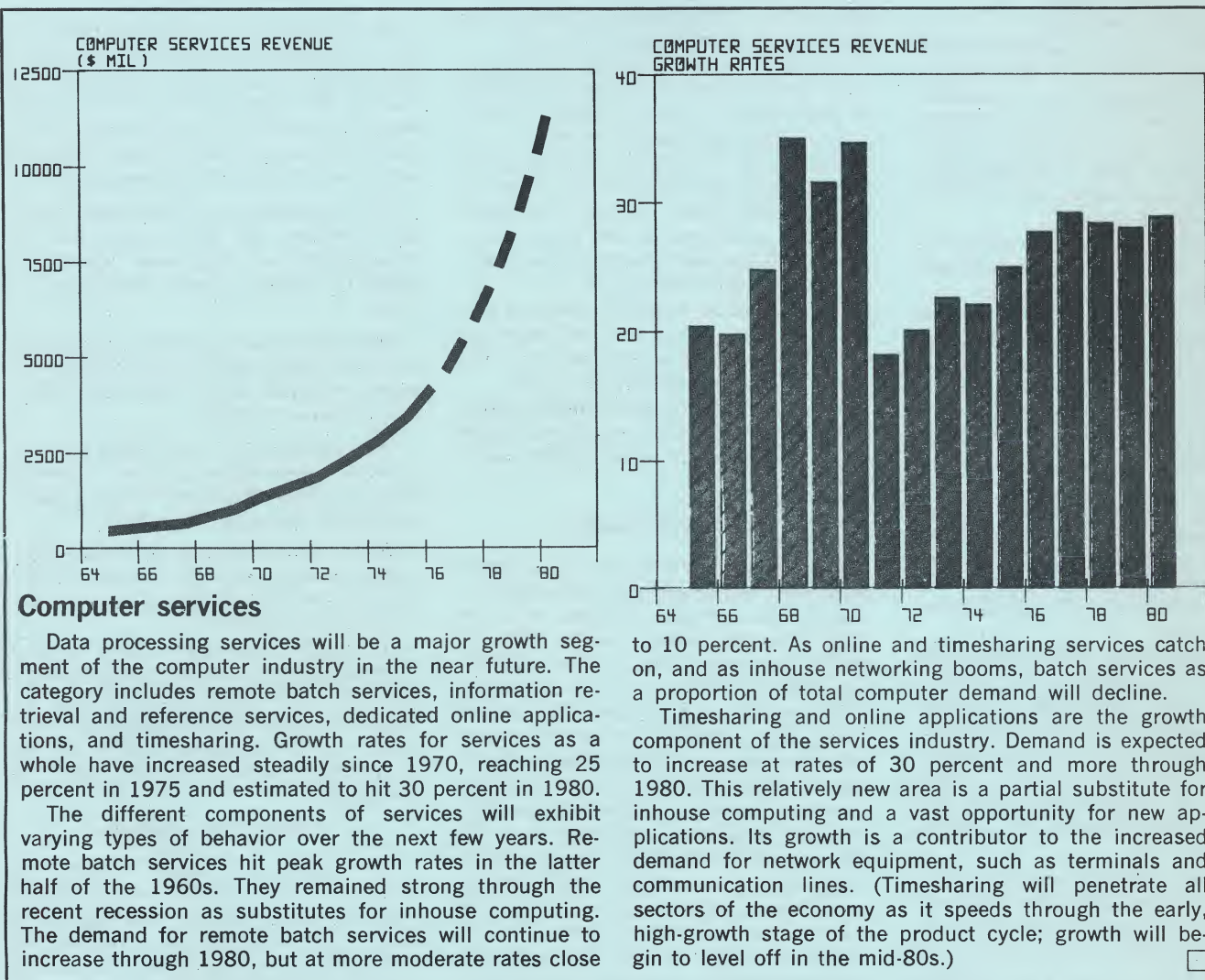
Surprised at Loopholes

On hearing this particular story, the senators in attendance at the hearing expressed surprise at the discrepancy between the rulings of the FRB and the Comptroller, indicating the last amendments to the Bank Holding Company Act had been designed to prevent such contradictory actions.

"We weren't even aware that the Comptroller got into the act," one said.

Adapso testified before the committee with other industries made up of small companies confronted with competition from national banks. These included representatives from the Investment Company Institute, Securities Industry Association, the courier and armored car industries, the American Society of Travel Agents and the National Auto Dealers Association, Inc.

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Portable terminal weighs 13 pounds

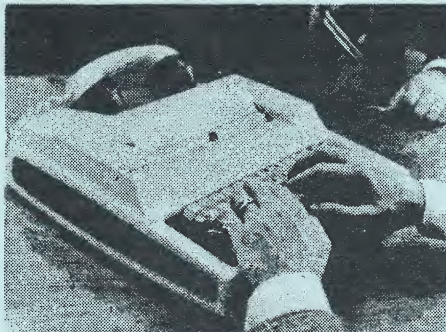
HOUSTON, TX — Designed for salesmen, financial analysts and others who need a portable computer terminal, the model 745 printing terminal from Texas Instruments weighs 13 pounds and combines a typewriter keyboard with a numeric key pad. A microprocessor replaces discrete components used in earlier models of the Silent 700 family, allowing a more compact design and increasing reliability, the company says.

Priced at \$1,995, the model 745 includes an acoustic coupler with adjustable muffs. Other features include half or full duplex operating mode, standard parity options, automatic paper loading and

30 character/second thermal printing.

A second model, the 743 KSR, designed for time-sharing and console applications, sells for \$1,395 and interfaces via TTY, EIA or optional integral modem.

Deliveries will begin next month, with quantity discounts available on both models.



Texas Instruments portable terminal.

Reprinted from Mini Computer News, Jan 29, 1976.

Other recent articles of interest to ATSU members but too long to appear here:

"The Future of Corporate Planning Models" by Thomas H. Naylor, Managerial Planning (publication of Planning Executives Institute), March/April 1976

"Business Needs a New Breed of EDP Manager" by Richard L. Nolan, Harvard Business Review, March/April 1976